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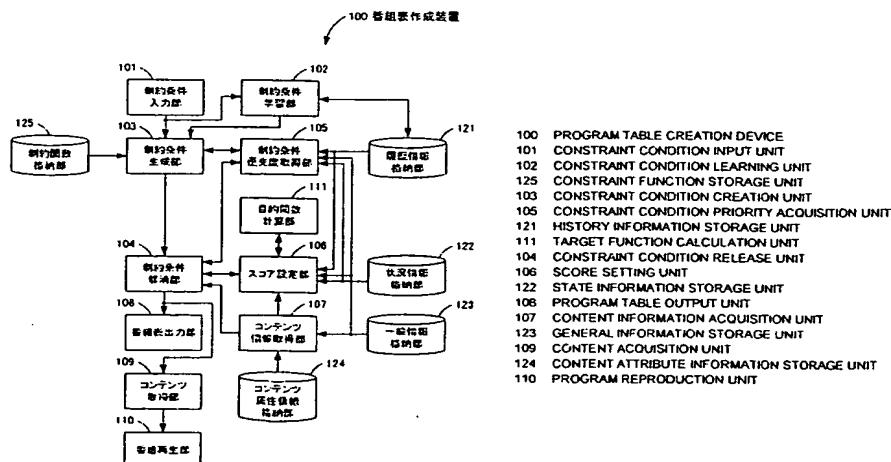
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[統葉有]

(54) Title: PROGRAM TABLE CREATION METHOD, PROGRAM TABLE CREATION DEVICE, AND PROGRAM TABLE CREATION SYSTEM

(54) 発明の名称: 番組表作成方法及び番組表作成装置並びに番組表作成システム



- 100 PROGRAM TABLE CREATION DEVICE
 101 CONSTRAINT CONDITION INPUT UNIT
 102 CONSTRAINT CONDITION LEARNING UNIT
 103 CONSTRAINT CONDITION CREATION UNIT
 104 CONSTRAINT CONDITION RELEASE UNIT
 105 CONSTRAINT CONDITION PRIORITY ACQUISITION UNIT
 121 HISTORY INFORMATION STORAGE UNIT
 111 TARGET FUNCTION CALCULATION UNIT
 106 SCORE SETTING UNIT
 122 STATE INFORMATION STORAGE UNIT
 108 PROGRAM TABLE OUTPUT UNIT
 107 CONTENT INFORMATION ACQUISITION UNIT
 123 GENERAL INFORMATION STORAGE UNIT
 109 CONTENT ACQUISITION UNIT
 124 CONTENT ATTRIBUTE INFORMATION STORAGE UNIT
 110 PROGRAM REPRODUCTION UNIT

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(57) Abstract: There is disclosed a technique for automatically creating a detailed program table for reproducing a content according to various conditions. According to the technique, a constraint condition generation unit (103) acquires a condition (constraint condition) relating to a user and describes the constraint condition by a constraint condition description function. A constraint condition release unit (104) performs constraint release processing by referencing the content attribute information stored in a content attribute information storage unit (124) according to the constraint condition description function supplied from the constraint condition generation unit, thereby acquiring an optimal program table (optimal solution) defining the temporal arrangement of contents. Moreover, when there are too many constraints and an optimal solution cannot be found, a constraint condition priority acquisition unit (105) narrows down the optimal program table and performs recalculation, which is performed by a score setting unit (106) when the constraint is insufficient and a plurality of optimal solutions are found. According to the optimal program table thus created, a content acquisition unit (109) acquires a content and a program reproduction unit (110) performs reproduction.

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(84) 指定国(表示のない限り、全ての種類の広域保護が可能)：ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類：

- 國際調査報告書
- 請求の範囲の補正の期限前の公開であり、補正書受領の際には再公開される。

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(57) 要約： 様々な条件に応じて、コンテンツの再生を行うための詳細な番組表を自動的に作成する技術が開示され、その技術によれば制約条件生成部103は、ユーザに係る条件(制約条件)を取得し、この制約条件を制約条件記述関数によって記述する。制約条件解消部104は、制約条件生成部から供給された制約条件記述関数に基づき、コンテンツ属性情報格納部124に格納されているコンテンツ属性情報を参照しながら、制約解消処理を行って、複数のコンテンツの時間的な配列を定める最適な番組表(最適解)を導出する。また、最適解が発見されない制約過多の場合には制約条件優先度取得部105によって、最適解が複数発見される制約不足の場合にはスコア設定部106によって、最適な番組表の絞り込みや再計算などが行われる。このようにして作成された最適な番組表に基づき、コンテンツ取得部109によるコンテンツの取得処理、番組再生部110による再生処理が行われる。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2005/006368

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ H04N7/173, H04H1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ H04N7/16-7/173, H04N5/44-5/46, H04H1/00, G06F13/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2001-343979 A (Matsushita Electric Industrial Co., Ltd.), 14 December, 2001 (14.12.01), Full text & EP 1137210 A2	1-24
X	JP 2003-187383 A (Nissan Motor Co., Ltd.), 04 July, 2003 (04.07.03), Par. Nos. [0008] to [0016], [0050]; Figs. 2, 3 & EP 1320045 A2 & US 2003/0114968 A1	1-24
X	JP 2003-187382 A (Nissan Motor Co., Ltd.), 04 July, 2003 (04.07.03), Par. Nos. [0008] to [0014], [0025] to [0026], [0033]; Figs. 2, 3 & EP 1320045 A2 & US 2003/0114968 A1	1-24

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

- A- document defining the general state of the art which is not considered to be of particular relevance
- E- earlier application or patent but published on or after the international filing date
- L- document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- O- document referring to an oral disclosure, use, exhibition or other means
- P- document published prior to the international filing date but later than the priority date claimed

-T- later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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-Y- document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

-&- document member of the same patent family

Date of the actual completion of the international search
22 July, 2005 (22.07.05)Date of mailing of the international search report
09 August, 2005 (09.08.05)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2003-223447 A (Nissan Motor Co., Ltd.), 08 August, 2003 (08.08.03), Par. Nos. [0013] to [0015] & EP 1331139 A2 & US 2003/0144012 A1	1-24
A	JP 2004-287715 A (Omron Corp.), 14 October, 2004 (14.10.04), Full text & WO 2004/084079 A1	1-24